ROYAL PHARM

## Certificate of Analysis

| Name of Product | Favipiravir |  |  |
| :---: | :---: | :---: | :---: |
| Batch No． | 20200605 | Mnf．Date | $2020 / 06 / 13$ |
| Test Date | $2020 / 06 / 13$ | Report date | $2020 / 06 / 14$ |
| Retest date | $2022 / 06 / 12$ | CAS No． | $259793-96-9$ |
| Quantity | 72 kg | Standard | Enterprise standard |


| Item | Specification | Results |
| :---: | :---: | :---: |
| Appearance | White to light yellow powder． | Conform |
| Solubility | Soluble or sparingly soluble in acetonitrile， sparingly soluble in methanol，slightly soluble in water． | Conforms |
| Identification | 1）The retention time of major peak in the chromatogram of sample solution should correspond to that of the standard solution as obtained in chromatographic assay by HPLC． | Conform |
|  | 2）IR spectrum conforms to the standard． | Conform |
| Water（by KF） | $\leq 0.5 \%$ | 0．14\％ |
| Residue on ignition | $\leq 0.1 \%$ | 0．07\％ |
| Heavy metals | ＜20ppm | Conform |
| Chloride | $\leq 0.06 \%$ | Conform |
| Melting point | $188 \sim 193^{\circ} \mathrm{C}$ | Conform |
| Related substances | Any Single Impurity $\leq 0.05 \%$ | 0．01\％ |
|  | Total Impurities $\leq 0.5 \%$ | 0．03\％ |
| Residue solvents | Dichloromethane $\leq 600 \mathrm{ppm}$ | ND |
|  | Toluene $\leq 890 \mathrm{ppm}$ | ND |
|  | N，N－Dimethylformamide $\leq 880 \mathrm{ppm}$ | ND |
|  | Acetonitrile $\leq 410 \mathrm{ppm}$ | 50ppm |
|  | Methanol $\leq 3000 \mathrm{ppm}$ | 47ppm |
|  | Toluene 5890 ppm | 8ppm |
|  | Ethyl acetate $\leq 5000 \mathrm{ppm}$ | ND |
|  | Ethanol $\leq 5000 \mathrm{ppm}$ | ND |


|  | Acetone 5 5000ppm | ND |
| :---: | :---: | :---: |
|  | Acetic acid 5 5000ppm | ND |
|  | N-heptane $\leq 5000 \mathrm{ppm}$ | ND |
|  | Pyridine $\leq 200 \mathrm{ppm}$ | ND |
|  | Trimethylamine $\leq 320 \mathrm{ppm}$ | ND |
|  | Dicyclohexyl Amine $\leq 20 \mathrm{ppm}$ | ND |
|  | Benzene $\leq 2 p p m$ | ND |
| Assay (on dry basis) | 98.0\% ~ 102.0\% | 99.96\% |
| XRD | Form A | Conforms |
| Particle size | D90 < 50um | 21.48um |
| Microbial test | Total Amount of aerobe $\leq 1000 \mathrm{cfu} / \mathrm{g}$ Yeast \& molds $\leq 100 \mathrm{cfu} / \mathrm{g}$ E.Coli: not detected | Conform Conform Conform |
| Conclusion | The test results conform to Enterprise | Iupors |

